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12/02/2023

Students' Experiences and Perceptions of Automated Hiring Through the Lens of the Crips Theory & Critical Disability Studies

The published research paper "Navigating a Black Box: Students' Experiences and Perceptions of Automated Hiring", by Armstrong et al. (2023) depicts the bias and unfair systems in automated hiring. The study includes using computer science students as participants, with the research question of: what are CS students' experiences and perceptions of automated hiring algorithms? Automated AI hiring has marginalized students' opportunities in being recruited or hired based on the flaws of the AI system. Since automated hiring is often utilized in many different industries including entry job levels and entry talent acquisition positions, students are minimized with not only the number of opportunities to land an interview, but also risk being marginalized without enough qualifications and experiences to combat the issue in automated hiring. In this paper, I will analyze the published research paper in automated hiring through the lens of the crips theory & critical disability studies. Not only are disabled people underrepresented and affected by larger systems of power, they have to also face the challenges in automated hiring just like other students.

Critical disability studies allow researchers to approach and conduct research around those who are disabled in terms of their social, political, cultural and historical experiences. This

helps researchers view disability as a social concept, not one with a fixed definition that prevents further research to be done (Harrington et al, 2023). It acknowledges the understanding of disability over different cultures, environments, and time periods that generates different results with these external factors that affects the validity of Critical Disability Studies. Moreover, CDS studies are interconnected with larger issues such as oppression and domination in systems of power, specifically certain individuals being more privileged, ideal, and dominant in the society. CDS studies allow a deeper understanding not only for the disabled community, but the overall community in raising awareness on the limitations and biases inherent in their lives. This will further connect with their struggles also in the biases generated from automated AI hiring systems.

The research study "Students' Experiences and Perceptions of Automated Hiring" generalizes its results based on only studying college computer science students to the general population. This methodological approach struggles to generalize its results to everyone in the industry, but only for the target population of recently graduated students, specifically in the Computer Science industries (Armstrong et al, 2023). The results are not a direct correlation, and are difficult to fully generalize onto the whole population since different academic backgrounds and experiences could also differ in the biases generated from automated hiring algorithms. For example, a qualified middle aged black male with a lot of work experience in the department of pharmacy and nursing could experience something different when encountering automated hiring systems, thus, participants should have been more diverse, specifically in specific subgroups through cluster sampling, to allow the results to be more generalizable to the overall population.

The research paper first introduces the concept and utilization of Automated Video Interviews. Automated video interviews are a tech-driven approach to job assessments and recruiting. Candidates are instructed to respond to pre-recorded questions through a digital platform, eliminating the need for live interviewers from the hiring firm. This method streamlines the hiring process, providing flexibility for both candidates and employers. Employers can review recorded interviews at their convenience, and some platforms leverage AI for additional insights from facial expressions, tone, and language (Raghavan, 2023). However, Automated Video Interviews raise a lot of questions in providing equal opportunities for candidates that have disabilities. As mentioned earlier, AI has the ability to recognize facial expressions, tone, and language, something the disabled community cannot control sometimes. As a result, the need of being "normal" and "average" so the AI doesn't rule you out is common from all candidates, but marginalizes the disabled community since they might struggle with being confident in their language, ability to speak in certain tones, and potentially making facial expressions that are "not suitable for a work interview". Not only does it affect the disabled community, researchers have also indicated that there are certain biases in the model that lack human quality traits, which poses an ethical concern on how to make AI hiring systems fair..

In addition, previous studies have demonstrated the impact of Social Cognitive Career Theory on automated hiring algorithms. Social Cognitive Career Theory is a framework that explains how individuals make career choices, integrating cognitive and social influences and one's belief in their own ability on the influences over career pursuits. Observational learning, expecting certain outcomes and consequences of career choices and personal interests all contribute to the decision making process. It also emphasizes the disparities in pursuing certain

careers such as minorities and disabled people. Relating back to the paper, minorities are heavily underrepresented in the Computer Science industry; thus, the Social Cognitive Theory suggests that cognitive and social influences affects their decision in choosing a field to work or stay in, which results in social norms created in certain industries as the demographically majoritized workers start dominating the industry and kicking more of those who are not similar out, as a result, present biases in their automated hiring processes against minorities such as those with disabilities who don't "fit in" their social norms.

Although the research paper identifies a lot of issues in AI automated hiring processes for students, it doesn't specify the effects of automated hiring processes on the disabled community. Therefore, analyzing AI hiring through the Crip theory and Critical Disability Studies would generate a more reliable result for the disabled population, and enhance the research validity in its results to its target population. The methodology of the research paper is also skewed. Although the researchers did require participants to label whether they have a certain disability or not, they never required participants to identify exactly what disability they have (Armstrong et al, 2023). This could result in over generalizing the results to the whole population. If all the participants who took part in the research only had ADHD, those with larger intellectual disabilities such as down syndrome cannot actually utilize the results efficiently for themselves as they have a different disability that potentially generates a different area of bias in AI hiring. At the same time, giving disabled participants the option to self identify their disability could result in an under or over reporting of their disorder. Although the self reporting option potentially makes it more comfortable and soothing for them, it is already very difficult for those who have disabilities to publicly report their disorder, so they could feel too embarrassed to

specify their own disorder when the option is not given. Alternatively, the researcher should have provided a set of close ended questions under the section of self-described demographics, which allows the researcher to group certain disorders together and see if there is a difference in the biases generated from automated hiring systems (Mankoff et al, 2010). Generalizing the whole disabled community as a whole is just like generalizing all Asian people as having the same culture. Certain disorders require more attention and help than others, and certain disorders also generate different issues in the working environment; therefore, being precise in collecting the demographic information of its participants to ensure that the results can generalize to the target population is crucial, and something that this research lacked.

In my opinion, I thought the data analysis team for this research was most likely the department that was executed the best, and also least required to consider for the disabled community. In other words, the data analysis team did the job they were paid to do, but it would be even more beneficial if they considered analyzing the results of the study through the crips theory and the lens of a disabled person. It would be best if the data analysis team also had someone with disabilities, so they can not only empathize, but also understand the need of the community and the goal of measuring such results for the disabled community.

On top of the biases created from Online Assessment practices where it struggles to measure and show a participant's actual abilities for the position, other factors such as referrals or social networks and social groups influence job opportunities as well. Student's tend to lack connections and potential networks with their minimum experience in the workforce, and with potential disabilities that could affect how they perform at a job, their opportunities could fall

short, missing transparency in their hiring processes and heavily impacted on the fairness of automated recruiting stages.

Overall, the study effectively addresses the research question, providing a comprehensive strategy used by participants in navigating automated hiring processes. However, there is still limited understanding on how automated hiring systems work and how it affects groups of minorities such as the disabled community. Further research needs to be done on the impact of AI on different groups of people, specifically including participants with disabilities and identifying the specific disorders they have to enhance a stronger and more valid result for the target population. The assumption that all disabilities are affected under their experiences in automated hiring systems neglects the differences each disorder could produce, and under the lens of the crip theory, being able to address ethical concerns in a research could impact how much the results can be generalized as well. Combatting discrimination in hiring processes that potentially arises from AI automated hiring systems would help empower minority groups that were previously misrepresented and disregarded. The disabled community is always forgotten because of other ongoing issues in the hiring process such as gender or race discrimination, but I believe that the disabled community should be represented more nowadays, especially with new ongoing phenomena such as the assessments automated hiring processes generate and ethical considerations involving the potential impacts of AI.

References

Armstrong, Lena, et al. “Navigating a black box: Students’ experiences and perceptions of automated hiring.” *Proceedings of the 2023 ACM Conference on International Computing Education Research V.1*, 2023, https://doi.org/10.1145/3568813.3600123.

Harrington, Christina N., et al. “Working at the intersection of race, disability and accessibility.” *The 25th International ACM SIGACCESS Conference on Computers and Accessibility*, 2023, https://doi.org/10.1145/3597638.3608389.

Mankoff, Jennifer, et al. “Disability studies as a source of critical inquiry for the field of Assistive Technology.” *Proceedings of the 12th International ACM SIGACCESS Conference on Computers and Accessibility*, 2010, https://doi.org/10.1145/1878803.1878807.

Raghavan , Manish. “Mitigating bias in algorithmic hiring: Evaluating claims and practices.” *The Societal Impacts of Algorithmic Decision-Making*, 2023, https://doi.org/10.1145/3603195.3603203.